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SURDUS LOQUENS, A CONTROVERSIAL IDEAL?

Final lecture given on the occasion of the retirement of

Paul van den Broek

as professor of Otorhinolaryngology

at the University of Nijmegen, the Netherlands

on Friday the 19th November 1999

SURDUS LOQUENS, A CONTROVERSIAL IDEAL?

*Qu'importe la surdité de l'oreille, quand
l'esprit entend? La seule surdité, la vraie
surdité, la surdité incurable, c'est celle de
l'intelligence.*

Victor Hugo (1843)

Mr. Rector Magnificus

Highly esteemed audience

More than three centuries ago, in 1692, a famous book was published by Johannes Conrad Amman in Amsterdam: *Surdus Loquens s. methodus, qua, qui surdus natus est, loqui discere possit* (for those who have no mastery of Latin: *The talking deaf man or the method through which somebody born deaf can learn to speak*). In this book, dedicated to his friend the business man Peter Kolaart from Haarlem, he described his own method to teach the deaf how to speak. This publication was a milestone in the history of working with deaf people all over the world. Deaf people in general cannot speak, which gives rise to the term deaf-mute. At the time the book was written, it was not possible for a deaf person to lead a normal life. Their employment was usually restricted to simple farm-labouring or they were sent to live in asylums with other deaf or debilitated patients.

In ancient times, the philosophers were convinced that language and intellect were inseparably connected and this marked the general opinion about deafness.

It was not until the late middle ages that deafness started to attract attention, especially from the church, which took interest in the fate of people who could not perceive the word of God because of their deafness: *Quod vitium ipsum impedit fidem* (or this ailment is an impediment for faith, St. Augustinus).

The book by Amman was soon translated into English and French and it became very famous. This was the beginning of a new era and the centuries that followed were characterised by emotional

outbursts and heated discussions about methods for educating deaf children. These discussions were mainly held by academics with normal hearing, such as pedagogues, psychologists, audiologists and teachers, but doctors also became involved.

This is the reason why I would like to take this opportunity to discuss a new medical technology, which has had a very great impact on the life of deaf children and their parents.

Over the past 15 years, we - in Nijmegen - have been intensively involved in a cochlear implant programme. At the beginning, only deaf adults were considered for implantation, but from 1990 onwards, we have also been including deaf children.

In a nutshell: Cochlear implantation involves an operation during which an electrode array is implanted into the cochlea. The electrode array is stimulated by a processor which is fitted soon after the patient is discharged from hospital. The processor converts sound into electric stimuli. These stimuli are then transferred through the electrode to the acoustic nerve. In this way, a deaf person can perceive sound.

The project was supported financially by funds received from the University Hospital in Nijmegen and later from the Fund for New Technologies in Medicine. I would also like to mention the continuous expertise and financial support we received from the Institute for the Deaf in Sint Michielsgestel. This institute was founded in 1840 and has played an outstanding role in the field of educating deaf children.

In view of the restricted time available and the complexity of the subject, I will limit myself to a few themes, although I am aware that this very shallow exploration will not do justice to the intricacy of the subject.

I will discuss the following topics: (1) Deafness as a problem, (2) Language development in word and sign, (3) The essence of the controversy, (4) The medical or cultural model and (5) Cochlear implantation as a new milestone.

Deafness as a problem

Despite all the technological developments made in the recent past, hearing impairment and total

deafness still seriously hinder the normal communication essential to people and their well-being and happiness.

We have learned to cope with the effects of progressive hearing loss that occurs with increasing age and fortunately, the improvements in hearing aid technology have enabled us to compensate to a certain extent for this type of hearing loss. However, for a child who is born totally deaf or who loses his or her hearing through a serious disease in early life, the situation is entirely different.

In the Netherlands, about 100 children per year are resigned to this fate, of whom about twenty suffer from total hearing loss, chiefly as a result of meningitis. The majority of the other children suffer from various different forms of recessive deafness, while their parents have normal hearing. For these parents, the diagnosis of complete deafness in their child usually comes as a shock, but occasionally it is the confirmation of a fear or suspicion that has been present for some time. Suddenly, all the perspectives they had for their child change entirely and a period of insecurity and doubt follows.

The limitations in auditory function have a severe and lasting influence on the development of the child and on the life of his or her parents. Learning the spoken language involves great difficulties and the child's acquired speech will remain unintelligible for most outsiders.

The parents have to make important decisions, such as choosing a school - a boarding school or a day school - choosing a mode of communication and at present, considering cochlear implantation. Fortunately, there are a number of excellent support centres in the Netherlands for the parents of young deaf children, where they can receive all the necessary guidance and also take lessons in sign language.

Many studies have shown that despite all efforts, the reading and writing competence of a deaf child lags behind that of his or her peers. The average reading level of deaf children seldom surpasses that of nine-year-old children with normal hearing. In England, most deaf children leave school without any form of qualification and two thirds go into unskilled labour, despite it being known that the non-verbal intelligence test scores of deaf children are just as good as those of normal children. In France, 80% of the deaf people are considered to be functional analphabets and only 5% attain

higher school qualifications. It cannot be denied that retardation in spoken and written language development has the greatest impact on a person's social perspectives, despite the enormous investments made in education over the past two centuries.

Language development in word and sign

Communication through spoken language is unique to man. There are around 6000 spoken languages. No other animal species, not even the chimpanzee, is able to communicate through speech, even after long periods of training. (Experiments have been done with signs and apparently, apes can learn these to a very limited extent).

The process of learning language proceeds in very close interaction with the development of independent thinking. Descartes considered deafness to be the greatest experiment of nature. The fact that signs can form a fully communicable language in a natural way, led him to conclude that man has a natural capacity for reasoning and abstract thinking. Although Chomsky's work has shown us that the development of spoken language is an autonomic process, we must realise that a number of basic conditions have to be fulfilled. The most important one is the capacity to hear.

A child's first language is picked-up by listening to his or her parents. We call this the mother tongue. However, the term "parent tongue" would be more appropriate, particularly in view of the contribution of both parents in the post-emancipation era.

Thus, not being able to hear, is the most important obstacle against a person's development of spoken language. Not surprisingly, many people have been seeking methods to promote this developmental process.

As I mentioned at the beginning, doctor Amman, who was working in Amsterdam, was the pioneer. But in other countries as well, for example in Germany (Heinicke), France (Pereire), England (Bulwer) and Scotland (Braidwood), institutes were founded where deaf children were taught to speak. It is very likely that the methods used at these institutes were successful to a certain extent, but they should be put into perspective, because nothing is known about the degree of deafness of the pupils. It did not become possible to measure hearing loss until the end of the nineteenth century and we all know that the presence of some residual hearing has significant influence on the results that can be achieved.

The Benedictine monk Ponce de Leon from the sixteenth century, was probably the first to realise the importance of signs for deaf people. In monasteries, the use of signs was already commonplace, due to vows of silence.

From an evolutionary perspective, sign languages are older than spoken languages. For our early ancestors, signs were probably the only modes of communication. Some indigenous people in Australia are still using sign language, for instance during hunting to prevent disturbing the game, but also in periods of sorrow. Sign languages are used by minority groups and nowadays they are used almost exclusively by deaf people. There are many different sign languages - actually, nearly as many as there are deaf communities. Even in a small country like the Netherlands, there are several sign languages, which differ even more than some of the spoken dialects.

During the 18th century, the French Abbé de l'Épée became very famous for his method of teaching deaf children to speak and write in French, using a personally-developed system based on signs. The results of his teaching efforts with two deaf sisters were so good that his fame spread rapidly.

He started the first private school in Paris, but had to make many personal sacrifices. In 1776 he published his first major work: *Instruction des sourds et muets par la voie des signes methodiques*. He based his instruction on the natural language of deaf people, a language composed of natural signs which were supplemented with a personally-developed system that followed the grammar of spoken French. Shortly after his death, the first state school was opened and all deaf children could attend. People who were interested in deaf education in Europe and also in the United States, visited the institute to learn the instructional methods; but also kings and nobles were to visit the institute. De l'Épée is seen as the founder of Deaf culture by deaf people from all over the world.

In several European countries, deaf institutes were built according to the French example. The reverend Henri Daniel Guyot (1753-1828) visited the institute in Paris and on returning to Holland, opened the first deaf institute in Groningen in 1790.

In the United States the situation was influenced very strongly by the American minister Thomas

Gallaudet (1787-1851) who came to Europe to visit the oral institute of Braidwood in Edinburgh. He was not welcome there and therefore went to Paris. He was also very impressed by the method of Abbé de l'Épée and did not return to the U.S. until many months later. In the meantime, he had persuaded the French deaf teacher Laurent Clerc to return with him to the U.S. and together they founded the first deaf school "The American Asylum for Education of the Deaf and Dumb" in Hartford, Connecticut. It became the birthplace of American Deaf Education using sign language.

At a residential school where deaf children live together, communication with signs develops naturally. At such institutes, the foundations were laid for what would later be called the "Deaf culture", a group of people bound together through a common language: sign language. Deaf culture unites people who historically, have been dominated by people who can hear and through this culture, have formed a very close community. Some suspicion towards the outer world is usually present and the impaired communication with people who can hear easily leads to isolation. In the Netherlands the interests of the Deaf culture are taken care of by the organisation "Dovenschap".

Sign languages as used by deaf people are autonomic languages, which are not derived from the spoken language of people who can hear. In the sixties, it was the deaf American researcher Stokoe who while studying sign language, concluded that sign language is completely equal to spoken language with its own structure, idiom and grammar. Sign language allows the full exchange of thoughts up to a high abstract level.

Martha's Vineyard, an island off the American East shore and recently tragically in the news through the aircraft accident of one of the young members of the Kennedy family, is the best-known example of a community in which a form of hereditary deafness is common through consanguineous marriages. This community of English settlers is often mentioned as an excellent example of a group of people whose deaf can communicate with people who can hear using sign language. Basically, this is a bilingual community.

Signs play an important role in the preverbal phase of every child. Visual communication between parents and the very young child is essential for the development of language. It has been shown that blind children who are not able to communicate by the visual mode are also retarded in their oral language development. Significant signs develop after the 10th month and this development is the same in deaf and normal children. Language development in word and sign follows the same

physiological processes. Therefore, congenital deafness is sometimes diagnosed very late. It is not until the age of 15 months that significant words start to play a major role and that signs gradually disappear, so that at the age of 18 months signs have been replaced by spoken language.

For deaf children, the continuation of communication with signs is a natural alternative and an opportunity for complete language development and cognition. Deaf children who have deaf parents learn sign language in the most natural way, because for their parents, sign language is also their mother tongue. However, 9 out of 10 deaf children have parents who can hear and they have obviously not learnt sign language as their first language. Therefore, these children are exposed primarily to spoken language, but it is very unlikely that they will ever learn to speak their mother tongue in an intelligible manner.

The essence of the controversy

The use of sign language as a means of communication for deaf people and especially for the education of deaf children, has been the subject of controversy that has left deep marks in the feelings of self-esteem of many deaf people. The discussion is led mainly by people who can hear and they are preoccupied with the fate of the deaf from their own point of view, but not from that of the deaf.

In Europe the controversy was mainly between the original German oral method of Heinicke who categorically rejected the use of signs and the French method of De l'Épée. In the United States the discussion was led by two remarkable persons. The first was Edward Miner Gallaudet, the son of Thomas Gallaudet who - as I mentioned earlier - was the founder of the American deaf institute in Hartford. The other was Alexander Graham Bell, the son of Melville Bell, in those days a well-known elocutionist, who spent his life on a project called visible speech. He hoped that the deaf would benefit from his method. Alexander Graham Bell would later become rich and famous through the invention of the telephone. Both were sons of well-known and probably dominant fathers and both had a deaf mother. There was one great difference: the mother of Edward Gallaudet was born deaf, had never learned to speak and communicated exclusively through signs. In contrast, the mother of Alexander Graham Bell was nearly totally deaf, but could communicate perfectly well orally.

Gallaudet and Bell had strictly opposing views on the issue of their backgrounds. For Edward

Gallaudet it was clear that sign language was the ideal method. As sign languages were hardly ever used in society, he was of the opinion that a boarding school was the best place for deaf children to learn sign language. The view of Alexander Graham Bell was entirely different. He saw the importance of a deaf child becoming integrated into the society that can hear. This would only be possible if the deaf child grew up chiefly between people who can hear and he or she would learn to speak, despite the difficulties and the disappointments that accompany this process. Bell preferred day schools to boarding schools. In 1999, integration is nothing new. Gallaudet and Bell spent most of their lives in defending their own theories. These ideas still have strong roots in American society, which is evident from the fact that after 100 years, the extremes of both theories are still embodied in two mighty organisations that carry the names of their proponents. One is the Alexander Graham Bell Association (1891), the organisation of oral deaf people with its own research institute and journal *The Volta Review*.

The other is the Gallaudet University in Washington, named after Thomas Gallaudet, the father of Edward Gallaudet. This is the only university in the world where all the teaching is done in sign language, mainly by deaf teachers. The university became news in 1988 when there was a revolt following the appointment of Dr. Elisabeth Zinser, a woman non-deaf outsider as rector of this university. Her appointment resulted in a demonstration before American congress, which lasted until Dr. Zinser resigned and Dr. I. King Jordan (deaf since the age of 21 years and employed at the university) took her place. It was an important victory for all the deaf, who found recognition of their right of self-determination. In the past, they never had this right, because everything about deaf people and for deaf people was decided by people who can hear. Any ideas the deaf had themselves were not considered important. The high-point or rather the low-point was the second international Congress for Teachers of the Deaf in Milan in 1888, when sign language was banned from teaching methods and learning spoken language became the main goal of the future. In this way, sign language was overruled for the next hundred years.

This controversy has also been alive in the Netherlands. During the past century, teaching with signs was normal at most deaf schools. However, most of them returned to oral education after the congress in Milan. The last institute to change at the beginning of this century, was the deaf institute in St. Michielsgestel, which would later adhere to the oral tradition for longer than any of the others.

Agnes Telling has made a thorough study of the background of this dispute between the advocates of sign language (the manualists) and the advocates of oral education (oralists). The results were often compared, but no conclusions were ever drawn, in order to satisfy both parties. Education with signs was also meant to teach a child to speak, but this goal was hardly ever achieved. Children with an exclusively oral education did learn to speak to some extent, but at the cost of a disproportionate amount of effort and at the cost of their cognitive development. Some 20 years ago it was thought that total communication was the best compromise between the two methods. However, the results of this approach have not lived up to expectations.

In our country it was mainly Tervoort who initiated and stimulated the study of sign language. Every human being has the right to communication mode which he can master in the best way. Restrictions of these rights are unacceptable and..... A sensible speech method, which every sensible person will favour if the child can master it, would gain in credibility if a phobia for science would be rejected in favour of serious concern that a child could be short of communication. Especially for the young deaf child, sign language has enormous potential for optimal cognitive development, but the limitations are also well-known. Deaf children in a strictly signing environment will not learn to speak and will experience life-long problems communicating with people who can hear. The resulting isolation can only be compensated for to a limited extent with technical means and sign language interpreters.

In recent years following experience with bilingual education for cultural minorities, there has also been a change in deaf education towards bilingual education. This means that children start with their native tongue, for deaf children sign language, and soon after they start to learn the Dutch language. Bilingualism does seem to be the ultimate compromise between manualists and oralists. However, one may question whether the scientific basis of bilingualism for spoken languages can be transferred to the combination of spoken and sign language, which require different skills. Time will tell whether we are on the right track with this method.

In the Netherlands a broad committee of experts (without doctors) wrote a report in 1997 and presented it to the Minister of Health and the Minister of Education. The report contained 66 recommendations about sign language, including the advice to recognise sign language as an

official minority language in the Netherlands. The report also stated that education in a sign language should never be given at the cost of oral education.

The medical or cultural model

Deafness is considered by most people to be a serious sensory disability, caused by a medical-biological deformity, which if possible, should be corrected. In 1821, the French ear surgeon Jean-Marc Gaspard Itard, attached to the renowned French deaf institute in Paris, published his famous book *Traité sur les Maladies de l'Oreille et de l'Audition*. In this book a large number of case histories on deafness are described with their treatment. Myringotomy, leeches in the neck and irrigations of the Eustachian tube were only a few of the many treatments that were advocated by him to cure deafness. The results were disappointing. Nevertheless many attempts were subsequently made to cure deafness with medical treatments, but with increasing knowledge, it became clear that inner ear deafness cannot be cured with medical treatments.

In recent history also, one still finds accounts of attempts to cure deafness. In his autobiography *Deafness, A Personal Account* David Wright describes his childhood experience with doctors in Harley Street, who tried to cure him of the deafness he acquired at the age of 7 years. They used injection needles, an ear-syringe and electrodes, and he reported that this was a very traumatic experience.

Contrary to what normal people think, deaf persons especially those who belong to the Deaf culture, do not consider their deafness to be a handicap, but more of a restriction when communicating orally with people who can hear but have not mastered sign language. To them, sign language represents a cultural self-awareness from which they derive their own identity. Deaf people in the Deaf culture are proud of their culture: they have their own language and other cultural expressions, which distinguish them from people who can hear. Deaf culture is positive. They would like to see that all deaf children grow up within this culture, with sign language as the main mode of communication. To them, having a deaf child is not a disappointment, but rather the fulfilment of a sincere desire to have a child that will grow up in their culture.

Stigmatising deafness is bad for the self-image of the growing child and could lead to psychiatric problems. In a study on deaf children, Van Eldik found that 41% of a group of deaf children aged between 4-18 years had psychological problems versus 16% of a normal group.

Not all deaf people want to belong to the Deaf culture. Especially those who have learned to speak or to communicate orally do not feel at home within this close community and prefer to live in the society of people who can hear. Until recently, there was no special organisation for these people in the Netherlands. But now the “Foundation for promoting oral language (Savon) for the deaf” has been founded.

It took until the end of this century to develop something that would rapidly change the perspective of deaf people. I am referring to cochlear implantation. This involves the implantation of an electric prosthesis into the cochlea, which stimulates the acoustic nerve with an electric current, to produce hearing sensations. Within the community of the deaf, this development has met great resistance and the old controversies have been revived.

Cochlear implantation, a new milestone

This spectacular invention introduced for clinical use by the American otologist William House and further developed at a few large centres in the world, has created new opportunities to treat or rather reduce the impact of deafness. A cochlear implant consists of an internal part which is placed inside the cochlea during an operation and an outer speech processor which resembles a normal hearing aid. Sound is collected via the microphone in the external part and is subsequently transformed into an electrical signal, which is transmitted to the inner ear.

The operation is similar to an average ear operation and in experienced hands, no serious complications occur.

The first implantations in adults were done at the end of the sixties. At that time, the implants were fairly primitive. There was one stimulation electrode and a simple analogue stimulation current.

The inner ear contains 30,000 hair cells which enable us to analyse complicated sounds with remarkable precision in a wide frequency range. It is therefore not surprising that in the beginning, a number of leading specialists were very sceptical about one single electrode being able to replace this complicated function. Nevertheless some spectacular results were reported in adults.

Over the course of about 25 years, the results have improved considerably thanks to the

introduction of new multi-channel systems, advanced coding strategies and further miniaturisation of components.

It was a logical next step to implant deaf children and, as so often occurs in medicine, this was only possible through a human experiment. Whether such experiments would still be permitted today, is an interesting question. But the experiment was successful and in the medical literature hundreds of publications have appeared which report the good results of cochlear implantation in deaf children.

The results gained great scientific credibility when the Australian Nucleus Implant was approved by the American Food and Drug Administration in 1989 for use in deaf children. This opened the way for the wide application of a new medical technology and has made it possible to limit the effect of a serious sensory deficit.

Cochlear implantation means that sound information is perceived and this enhances the intelligibility of spoken language considerably. The results differ from person to person owing to factors such as age, duration of deafness and predisposition. A recent study has shown that 44% of the children reached open speech understanding of up to 70% without lip-reading, 61% reached more than 50% and 84% reached more than 40%. For children who had never been able to hear before these are stunning results, which so far could not be reached in any other way. A measure which expresses the hearing impairment of children who use a conventional hearing aid is the “equivalent hearing loss”, introduced by Snik. After 3 years of implant use, total deafness was reduced to an average functional level of 70-80 decibels and the children were functioning just as well as a child with 70-80 dB hearing loss. It is almost self-evident that such undisputed improvement in hearing makes a positive contribution to language and cognitive development. However, some people still tend to be sceptical. Perhaps the most impressive result of all is the significant improvement in the intelligibility of the child's speech, but the outcome also depends largely on the size of the investment in oral education.

Measurement of language skills, cognition and social emotional status remains one of the most difficult parts of the evaluation process. Reports about the positive effects on language development can be found in the literature, but much work still has to be done to convert the unfaithful and the critics.

In view of the fact that it is generally accepted that language development has a critical period,

implantation must be done at the earliest possible age. In some countries, implantation is even performed before a child's first birthday.

The medical world is very surprised that cochlear implantation has aroused so much emotion and resistance among deaf people and those who support their background and culture. This new technological development has again given rise to controversy between advocates and opponents of sign language in a time that sign language, as an emancipating attainment for deaf people, seems to be less controversial. Doctors who have presented their cochlear implantation results at international congresses, sometimes accompanied by sensational publicity, have met opposition from deaf organisations that cannot refrain from demonstrating during congresses, or from accusing them of lying about the results; they even speak of murder of the deaf community and of genocide. Fortunately, this has not been our fate in the Netherlands. Such serious accusations can only be properly understood by looking back at the history of the Deaf culture and the historical controversy. Cochlear implantation is considered to correct a defect that is not actually a defect, but a variation of nature. Deafness does not need to form a limitation for complete development of communicative and cognitive functions. Psychologists and culture scientists have studied this enigma and tried to lay scientific foundations for this point of view. The most authoritative amongst them is Harlan Lane, who has described the history and the viewpoints of the Deaf community in fascinating books and publications. He considers cochlear implantation to be another oppressive action not only of doctors, but also of audiologists, psychologists, speech therapists and pedagogues. So we are in good company. In the beginning there was resistance against the technique due to the moderate results and the possible complications of surgery. As time went by, this resistance was quelled by facts, but it has been replaced by more psychological and culture philosophical arguments, which are much more difficult to revoke, because we still know little about the long-term results.

The results have gradually improved through new technological developments in coding strategies, better indications for patient selection and by performing implants at a younger age. At present, more than 25,000 people around the world have received an implant, about half of whom are children.

In the Netherlands, the team from Nijmegen/St. Michielsgestel have implanted over 90 children

since 1990. Intensive rehabilitation is essential after implantation. Experience outside the Netherlands and also at our own centres has shown that only programmes with intensive aural and oral training lead to good results. Deaf children who receive an implant at a young age are very likely to become integrated into normal schools or schools for the hearing impaired and will therefore live up to one of the political ideologies of the 21st century: Going to school together. Our results are promising in this respect: 50% of the children without any additional handicaps who were implanted by our team more than 2 years ago, are now going to normal schools. The subject of cochlear implantation is still under heavy discussion in the Netherlands. At the time of writing the text of this lecture, cochlear implantation in children had still not been implemented as a regular Dutch health care provision, in contrast with the situation in all our neighbouring European countries. However just a few days ago the minister of health wrote a letter to the chairman of the Dutch Health authority, stating that she had decided that cochlear implantation would be accepted as a regular health provision. It is difficult for us to understand that our Minister of Health, who was director of the University Hospital in Utrecht when the first implants were performed there, has needed so much time before taking a positive decision. She too has been influenced by the cultural debate, in which the scientific facts are blurred by emotional arguments. Cochlear implantation does not pretend to do anything more than relieve the auditory limitations inherent to deafness. Improving people's hearing enhances their spoken language development and this is one of the main objectives of bilingualism. What more could we ask? In this way we are trying to build a bridge towards the members of the Deaf community, so that they will be able to profit from the knowledge and experience of a new generation of participants for whom bilingualism - with the aid of a cochlear implant - holds great significance. If people are really serious about the aims of bilingualism, then cochlear implantation cannot be implemented fast enough as a regular health care provision.

The end

Predicting the future is not simple. But one thing is certain: there will be many many new developments. Our knowledge of the genetic basis of deafness has expanded considerably over the past few years and this will have great implications for the diagnosis, treatment and prevention of deafness. Also, vaccination against haemophilus influenzae, one of the causes of

meningitis that can result in deafness, is beginning to bear fruit. The vaccination against pneumococci is due to be introduced shortly. Many technical developments can be expected, such as better and more selective electrodes, further miniaturisation and completely implantable systems.

Ladies and Gentlemen, I have shared with you some considerations surrounding a problem that has occupied myself and others for many years. Caring for deaf children is an intense challenge and many disciplines are involved. I have learned to be modest about the role played by the doctor in children with congenital deafness. I have entered an entirely different world, a world centred around deaf people. I have met many deaf adults, deaf children and their parents, and I have deep respect for the way they cope with what I still always consider to be a serious handicap, their positive outlook on life and their never failing energy to seek the best solution for their child. They deserve more than the centuries-long, continuing discussions about word and sign. Firstly, parents should have the right to decide for their child and this should be respected. Also I greatly admire those involved in education for the deaf at schools and institutions. It has been a great privilege to work between so many different disciplines and I feel that I have been enriched by them all. I dedicate this lecture to these people, hoping that what has been brought forward this afternoon as a historical and cultural controversy, will soon clear up in the new millennium.

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Cover: Painting “a lesson by Abbé de l’Epée, painted by Nachor Ginouvier, deaf, after a draft by Frédéric Peysson, 1891. Collection Institut National des Jeunes Sourds, Paris.